ADAPTIVE ANALYSIS OF SEEPAGE FLOW USING MULTILEVEL FINTE COVER METHOD

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The multilevel finite cover method is applied to adaptive analysis of seepage flow problem. For the index of adaptivity, 2 methods are proposed, one is based on the a posteriori error estimation, and the other is the a priori estimation based on the geometric configuration. The latter method is applied to the seepage flow problem of rock including complicated cracks. The evaluation method of equivalent permeation constant is calculated based on 2 methods, one is based on the volume fraction of crack, and the other is based on the integration along the crack. The latter one is more accurate, but for large scale problem former one is less memory consuming. The rock model with 3 cracks and 1000 cracks are analyzed for demonstration.